

# **City of Troy Department of Public Utilities**

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## **Stormwater Management Program (SWMP)**



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# What is Stormwater Runoff

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- *“Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground.” - EPA*
- Two main components responsible for stormwater pollution:
  - ◆ Increased volume & rate of runoff from impervious surfaces
  - ◆ Concentration of pollutants in runoff

# What is Stormwater Runoff *cont'd*

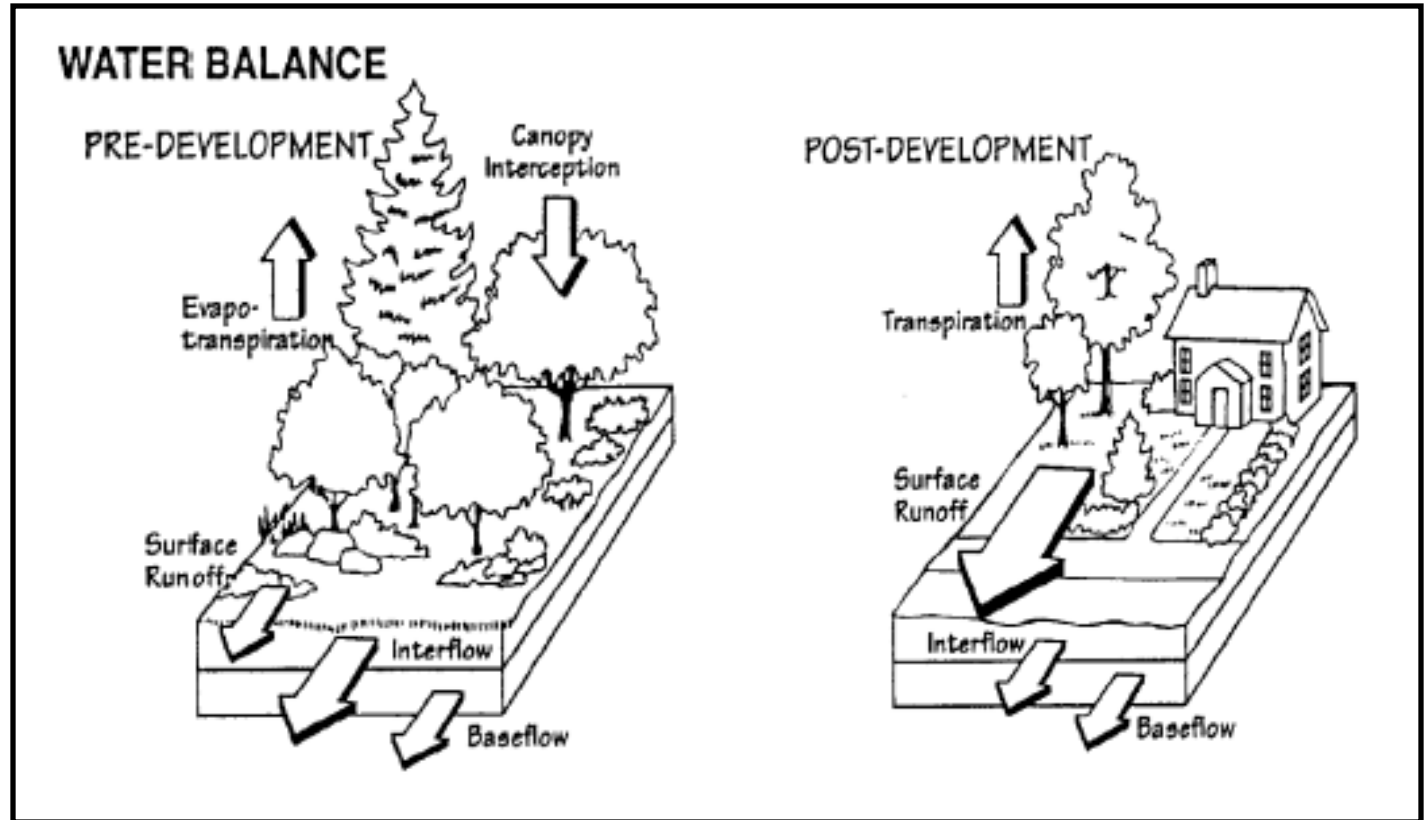
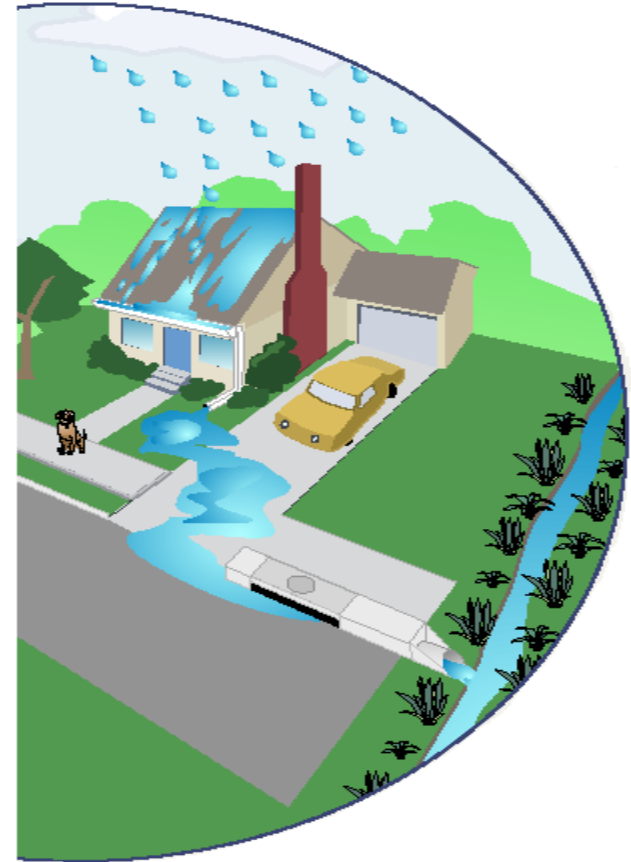


Figure from NYS DEC Stormwater Management Design Manual

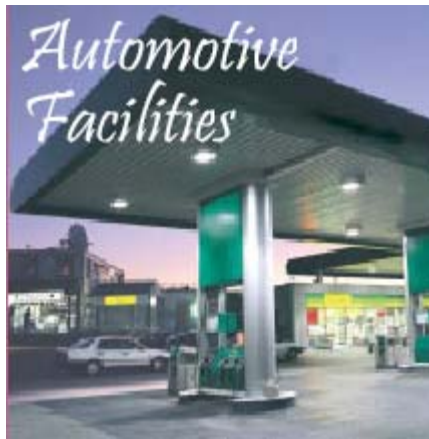
# Pollutants Associated with Stormwater Discharges

- Floatables: street litter
- Settleables: soil/dirt
- Suspended Solids: smaller soil particles
- Phosphorus: fertilizers
- Nitrogen: fertilizers
- Coliform: pet waste
- Metals
- Bio-degradable



# Other Sources of Stormwater Runoffs

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# Effects of Stormwater Runoff

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- Habitat modification and loss
- Increased localized potential of flooding
- Decreased aquatic biological diversity
- Increased sedimentation and erosion
- Increased bacteria levels in recreational waters

# Advantages of Stormwater Management

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- Protection of wetlands and aquatic ecosystems
- Improved quality of receiving waterbodies
- Conservation of water resources
- Protection of public health
- Flood control

# Stormwater Phase II Rule

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- Published by U.S. EPA in December 1999, Adopted by New York State Department of Environmental Conservation (NYS DEC) effective January 8, 2003
- *“Requires operators of small MS4s in urbanized areas to develop and implement a storm water management program which addresses six minimum control measures.”*  
-EPA
- MS4 = Municipal Separate Storm Sewer Systems



# Objectives of SWMP

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- Full implementation of SWMP by Jan. 2008
- Educate public on stormwater pollution
- Detect & eliminate illicit discharges
- Control construction site runoff
- Coordinate pollution prevention measures in to City operations via Six Minimum Control Measures

# Control Measure 1: Public Education and Outreach on Stormwater Impacts

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- Identify & educate public on local impacts of stormwater discharges
- Informational brochures on:
  - ◆ Lawn & garden care
  - ◆ Pet waste management
  - ◆ Pollution management for businesses
  - ◆ Trash/hazardous material disposal management
  - ◆ Water conservation
- City-wide survey to identify educational interests

## Control Measure 2: Public Involvement & Participation

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- Identify local point of contact:  
Dept. of Public Utilities  
25 Water Plant Road  
Phone: (518) 237-0319  
Email: [loc.truong@troyny.org](mailto:loc.truong@troyny.org)
- Informational brochures available at City Hall/DPU and City webpage
- Community Hotline to report illicit discharge: Rensselaer County Health Department  
(518) 270-2660

## Control Measure 2: Public Involvement & Participation *cont'd*

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- Public meeting for comment on SWMP Annual Report – every May

# Control Measure 3: Illicit Discharge Detection & Elimination

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- Identify sources of illicit discharges in local area
- Develop sewer system mapping/outfall mapping using GPS – joint effort with Rensselaer County and other municipalities
- Augment/update regulations prohibiting illicit discharges
- Inform public & businesses of hazards due to illicit discharges

## Control Measure 3: Illicit Discharge Detection & Elimination *cont'd*

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- Implement regulation/ordinance prohibiting illicit discharges
- Implement program to detect and eliminate illicit discharges
- Illicit discharges include (not limited to):
  - ◆ Recreational sewage from boats
  - ◆ Failing septic systems
  - ◆ Pet waste
  - ◆ Oils
  - ◆ Other Industrial Fluids/Hazardous Materials

# Control Measure 4: Construction Site Stormwater Runoff Control

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- Opportunity for public comment on construction plans
- Review/augment current regulations on erosion and sedimentation control
- Review/augment current regulations on construction site waste management
- Review/augment procedure for construction site review
- Review/augment current regulations on site inspections/enforcement

## Control Measure 4: Construction Site Stormwater Runoff Control *cont'd*

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- Educate/training of construction operators
- Implement regulations on erosion and sedimentation control
- Implement regulation on site inspections/site review/enforcement



# Control Measure 5: Post-Construction Stormwater Management

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- Identify management practices to aide in reducing pollutant discharge
- Establish regulation/strategy to control post construction runoff
- Establish regulation/strategy for site inspection & maintenance
- Implement regulation on post construction runoff/site inspection/maintenance

# Control Measure 6: Pollution Prevention/Good Housekeeping

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- Use DEC NYS Management Practices Catalog for Nonpoint Source Pollution Prevention as guide
- Continue municipal operations to prevent pollutant discharge:
  - ◆ Street cleaning
  - ◆ Catch basin cleaning
  - ◆ Spill response/prevention
  - ◆ City-wide recycling program

# Control Measure 6: Pollution Prevention/Good Housekeeping *cont'd*

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- Review/augment pollution prevention plan addressing discharge of pollutants from municipal operations
- Provide training for employees on pollution prevention
- Implement pollution prevention program/plan

# Resources

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- City of Troy – DPU: <http://www.troyny.gov>
- U.S. EPA: <http://www.epa.gov>
- NYS DEC: <http://www.dec.state.ny.us>
- Rensselaer Co. Public Health Dept.:  
<http://www.rensco.com>
- Stormwater Manager's Resource Center:  
<http://www.stormwatercenter.net/>

# Acknowledgements

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- U.S. EPA Office of Wastewater Management
- New York State Department of Environmental Conservation, Division of Water
- Rensselaer County Health Department
- Rensselaer County Economic Development and Planning